

REMARKS

Claims 1-20 are pending. No new matter has been added by way of the present submission. For instance, claims 1-4 have been amended to indicate the carbon nanotube in contact with the organic material does not directly contact the metal as supported by figures 1-3 and 5 as well as the present specification at page 14, lines 8-11. Accordingly, no new matter has been added.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Restriction Requirement and Request for Rejoinder

The Examiner has withdrawn claims 3-20 from further consideration asserting that they relate to a non-elected species. Applicants respectfully disagree and request that the Examiner reconsider. Applicants point out that the inventive aspect of the elected invention relates to the subject matter of claim 1. Moreover, even though the language of other claims (for instance independent claims 3 and 4) may differ, each of these claims essentially requires a carbon nanotube in contact with an organic material having a six-membered carbon ring and a metal in contact with a part of the carbon nanotube. Accordingly, based upon this related subject matter, Applicants submit that the Examiner should expand the consideration of the claims to claims 1-19. Therefore, rejoinder in this regard is respectfully requested.

Issues under 35 U.S.C. §102(e)

The Examiner has rejected claims 1-2 under 35 U.S.C. §102(e) as being anticipated by Tsukamoto et al., U.S. Publication No. 2004/0241900 A1 (hereinafter referred to as Tsukamoto

‘900), or Lyons et al., USP 6,825,060 B1 (hereinafter referred to as Lyons ‘060). Applicants respectfully traverse these rejections.

The Present Invention and its Advantages

The carbon nanotube of the present invention acts to solve the problem concerning the large contact resistance at the interface between the organic material and the metal electrode. In effect, the carbon nanotube according to the present invention forms a bridge between the organic material (channel) and the metal (electrode region) and thus provides better contact. A review of the specification reveals that the carbon nanotube in contact with the organic material does not contact the metal. That is, the organic material and the metal are not in direct contact with one another.

Distinctions Between the Present Invention and the Cited Art

In Tsukamoto ‘900 the carbon nanotubes are dispersed within the organic material which is in contact with the metal electrode. Thus, there is direct contact between the metal electrode and the organic material of Tsukamoto ‘900. However, the present claims require that the organic material and the metal do not directly contact each other. Therefore, there exists no anticipation based upon Tsukamoto ‘900.

Additionally, Applicants further point out that a passive layer intervening between the organic layer and the electrode is outside of the scope of the present claims in that the passive layer would prevent the carbon nanotube (for instance in contact with the organic material) from contacting the metal.

Concerning Lyons ‘060, Applicants submit that Lyons ‘060 also discloses an organic

layer containing an organic material and carbon nanotubes. Thus, the above distinctions discussed with respect to Tsukamoto '900, are equally applicable to the disclosure of Lyons '060.

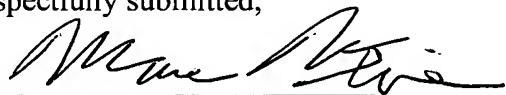
In summary, Applicants submit that there is no anticipation of the present claims based upon either Tsukamoto '900 or Lyons '060. The Examiner is therefore respectfully requested to withdraw all rejections and allow the currently pending claims.

If the Examiner has any questions or comments, please contact Craig A. McRobbie, Registration No 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 
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